U. S. BROILER INDUSTRY AND THE AI CHALLENGE

John A. Smith DVM, MS, MAM

Fieldale Farms Corporation

Primary Challenge: Public Perception

- We fear an unjustified consumer flight from chicken more than the risk of a devastating disease in our domestic flocks
- There are a number of reasons for this conclusion, on a number of levels:
  - Assessment of the current lack of public understanding
  - Confidence in our security from the avian disease

Public Perception: Human vs. Avian Disease

- Asian highly pathogenic H5N1 bird flu is an avian disease with sporadic human cases in persons with intimate contact with diseased birds
- While the possibility of adaptation for efficient human transmission is a real concern, and
- While public health agencies need to be preparing for the next pandemic (whether H5N1 or another strain)…

Human vs. Avian Disease

- Many in industry feel that some experts and officials have overstated the current domestic threat, and the media respond
- We fear a public overreaction to future reports of any type of AI in birds of any sort
- Discussion/reporting should be based on science and reasonable probabilities and reported in the proper context

Current Situation

- Asian H5N1 does not exist in N. America
- We do not expect it to come here
- We are prepared to detect and contain it should it gain entry
- Infected meat is extremely unlikely to reach the consumer
- Proper handling and cooking precludes infection

Consumer Assurance

- Industry, CDC, USDA are carrying this message to consumers
- The government is more credible than the industry that has the product to sell
- Public education is difficult—complex issue, short attention spans, immediate recollection of sensationalistic sound bites

Public Health Infrastructure Needs Improvement

- Lack of domestic human vaccine capacity is a critical national security issue
- Ready availability of vaccines and drugs would assuage public concerns
- Stockpiling drugs (with a finite shelf life and susceptibility to resistance) while allowing continued viral circulation at the source is counterintuitive

Public Health Approach

- As long as the virus circulates in Asian poultry, the threat remains; the longer it persists, the more opportunities for human infections occur, and the greater the chances of eventual emergence of a human-adapted strain

Public Health Approach

- More resources should be devoted to control at the source—Asian poultry populations
- Control in Asian poultry, and reduction of human exposure, is a more judicious application of resources vs. waiting for emergence of a human-adapted virus and mounting a human pandemic response

Public Health Approach

- Controlling AI in the village flocks of developing Asian nations will be a daunting challenge; severe lack of infrastructure
- Is it any more daunting than the current prospects for confronting a massive human pandemic?
- FAO, OIE, and APEC have made recommendations; these need support

Domestic Industry Preparedness

- The domestic commercial poultry industries, with the states and the USDA APHIS VS, are well prepared to prevent, detect, and contain Asian bird flu, as well as other H5 and H7 subtypes
- Multiple layers of protection are in place
- These protections need continued funding support

Current Domestic Threat Level

- Asian high path H5N1 has never been detected in any sort of bird, wild or domestic, commercial or non-commercial, in the United States
- H5 and H7 are very uncommon, and are not tolerated, in US commercial poultry
- While wild waterfowl are the natural hosts, US commercial birds are isolated from wild birds
- There is only minor overlap of Asian and North American flyways, and wild birds are being monitored in Alaska; role of migratory waterfowl is currently being questioned

Current Domestic Threat Level

- AI occurs sporadically in non-commercial (backyard) flocks; low path H7N2 circulates in the northeastern live bird marketing system (LBMS)
- Commercial birds are also isolated from these flocks
- A state-federal-industry program to control and eliminate H5/H7 AI from the LBMS is reducing the incidence, with the goal of eradication

Current Domestic Threat Level

- The US does not import any live birds or poultry products from regions affected with HPAI
- Inspections at all points of entry are intended to exclude all foreign plant and animal diseases that threaten domestic agriculture
- Animals and birds imported from disease-free regions are quarantined and tested to exclude foreign diseases
- Companies limit employee travel to affected areas

Domestic Industry Preparedness

- Summary: while an introduction of Asian bird flu into domestic poultry populations is not impossible, it currently is highly unlikely; Example: END control has been largely successful
- What if it still gained entry? We are prepared to detect it quickly and respond rapidly

Domestic Industry Preparedness

- Existing biosecurity programs, designed to limit spread of common endemic diseases, should also limit spread of an introduced disease prior to detection
- Restriction of visitors, prohibition of contact with other birds and farms, protective clothing, disinfection of equipment, rodent/feral animal control, etc.

Domestic Industry Preparedness

- Growers and employees are prohibited from owning pet birds or other poultry
- All-in-all-out systems provide a complete break between flocks
- Integrated structure isolates all production steps into discrete packages
- Ancillary services and geographical overlap remain a concern

Domestic Industry Preparedness

- In areas with multiple companies, industry disease control committees are common
- $\geq$ One rep from each company, under auspices of poultry federation, state ag dept, or state/university diagnostic lab system
- Develop industry-wide disease control programs; effective because of industry buy-in; DPI is an excellent example

Domestic Industry Preparedness

- Active monitoring for AI has been ongoing for years:
  - Testing of broiler flocks for Mexican export
  - NPIP “US AI Clean” program for breeders
  - State monitoring programs
- These programs are being intensified and an NPIP program is expanding to production flocks of broilers, turkeys, and egg layers

NCC Testing Program

- Program to ensure consumers that flocks and the food products from them are free of potentially hazardous forms of AI
- NCC members produce 95% of US chicken
- Each flock is sampled on the farm, tests conducted at approved labs
- Any flock with any H5 or H7 will be humanely destroyed on the farm

NCC Testing Program

- No infected birds will be sent to processing or otherwise enter the food chain
- A two-mile control zone will be established around any infected flock, and all flocks in the zone tested weekly until slaughter
- Monthly reports submitted to NCC
- Yearly audits by independent auditors

Domestic Industry Preparedness

- Passive surveillance, consisting of diagnostic tests on any flock with signs remotely resembling AI, has been in place for several years in most states, and is incorporated into the new NPIP program
- Such a dramatic disease is very unlikely to go undetected in the commercial system

Domestic Industry Preparedness

- Growers and managers have an economic stake in the health and performance of the birds, so tend to be very vigilant
- The industry has conducted grower and management awareness training
- Managers and veterinarians are well versed in the procedures to quarantine suspect flocks and obtain a rapid diagnosis

Handling of an actual case

- Any case of H5 or H7 AI in a domestic flock would result in immediate quarantine of the flock with destruction on site
- Low path is more likely, but would be handled the same
- Proven methods of large-scale euthanasia and disposal that are humane, expeditious, environmentally sound, and safe for workers are available

Handling of an actual case

- A quarantine zone would be established around all cases, with intensive monitoring
- Worker protection is now a priority
- In the US commercial system, relatively few people are exposed to the live birds during the production of tremendous amounts of poultry products, making human exposure less of a problem than in Asia

Handling of an actual case

- It is highly unlikely that any infected flocks would make it to slaughter, precluding exposure of plant workers or consumers to raw meat from infected birds
- Finally, if all these hurdles were breached, and meat from infected birds made it to market, proper handling and cooking procedures would preclude infection

Summary

- The risk of introduction of Asian bird flu into the domestic commercial poultry population is currently very low
- We are well prepared to detect and contain any incursion that might occur, but funding is critical
- Even in the event of an outbreak, the risks to farmers, poultry workers, and consumers is minimal under the US system